



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,314	12/12/2003	Werner Liederer	P24536	9074
7055	7590	04/05/2006	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C.			MAKI, STEVEN D	
1950 ROLAND CLARKE PLACE			ART UNIT	
RESTON, VA 20191			PAPER NUMBER	
			1733	

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/733,314

Applicant(s)

LIEDERER, WERNER

Examiner

Steven D. Maki

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1733

- 1) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- 2) Claims 61-66 and 69-70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 61, each base pitch having at least two profile structures and the first base pitch comprising at least one profile structure are inconsistent with each other. It is unclear how many profile structures are required for each base pitch.

In claims 69 and 70, there is no antecedent basis for "the circumferential grooves".

- 3) Applicant is advised that should claim 12 be found allowable, claim 13 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim.

See MPEP § 706.03(k).

Claims 12 and 13 have the same scope.

The use of different labels such as "first" verses "second" fails to create a difference in scope.

- 4) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1733

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Japan 408

6) **Claims 1-14, 17-19, 21, 23-26, 30-31 and 35-42 are rejected under 35 U.S.C. 102(b) as being anticipated by Japan 408 (JP 4-154408).**

Contrary to applicant's arguments, the claimed "circumferential groove" reads on a zigzag circumferential groove formed by grooves 7.

Japan 408 discloses a pneumatic radial tire having a size such as 225/50R16 (bottom left on page 3). See figures 1-3 and abstracts. The claimed base pitches read on Japan 408's base pitches A, B and C. The claimed cross groove(s) read on the "gently slant grooves" 4 which are (a) located between the pitch boundaries and (b) inclined at 60-70 degrees with respect to the circumferential direction. For example, pitch C in figure 1 has four cross grooves. The gently slant grooves are connected via a curved portion to "steeply slant grooves" 4, which (a) extend toward the equatorial plane

Art Unit: 1733

and (b) are inclined at an angle of 10-20 degrees with respect to the circumferential direction. The claimed profile structures read on the land portions separated by the above noted gently slant grooves. As can be seen from figures 1 and 2, the land portions separated by the gently slant grooves have alternating different length. For example, in the far right pitch B in figure 1, the lines from reference numeral 9 indicate two land portions having a longer length than the land portion therebetween and the circumferentially next land portion. Furthermore, pitch B also includes part of two land portions at the boundaries thereof. These two parts ("profile structures") have a length less than the length of either of the alternating land portions. Pitch B therefore has three different length "profile structures". With respect to the method claims, Japan 408 teaches arranging the base pitches (figure 1) and teaches a pneumatic radial tire having a size such as 225/50R16, which inherently is made by a method of manufacturing a tire.

Cesarini et al

7) **Claims 1-6, 8-26, 30-31, 35-60 and 67 are rejected under 35 U.S.C. 102(b) as being anticipated by Cesarini et al (WO 99/16631).**

Contrary to applicant's arguments, the claimed "circumferential groove" reads on a circumferential depression.

Cesarini et al discloses a pneumatic radial tire having alternating groups of transverse grooves 15. See figure 1-3. The number of grooves in a group may be 3-7. In figure 2, a group of grooves has a pitch P. This pitch P is a "base pitch". At page 10, Cesarini et al teaches regulating the pitch value between individual grooves or the pitch

Art Unit: 1733

value between groups of consecutive grooves. A group of grooves constitutes a base pitch and Cesarini et al teaches varying the value of this base pitch. See page 10 lines 21-26. Cesarini et al therefore teaches base pitches having different circumferential lengths. The claimed profile structures read on the land portions between adjacent transverse groove shoulder portions 16, the land portions between adjacent notches 28 or the land portions between the transverse groove shoulder portion 16 and notch 28. In the figure 3 embodiment, a central depression ("circumferential groove") is located at the equatorial plane of the tire. In the claims "circumferential groove" reads on circumferential depression. As to claim 43, note circumferential grooves 21, 22.

8) **Claims 1-64 and 66-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cesarini et al in view of Japan 408 and optionally Europe 436 (EP 268436).**

Cesarini et al is considered to anticipate claim 1. In any event, it would have been obvious to one of ordinary skill in the art to provide Cesarini et al's base pitches P with different circumferential lengths since (1) Cesarini et al teaches regulating the pitch value between the *groups* of consecutive grooves to reduce noise (page 10) and (2) Japan 408, also directed to a directional tread pattern having alternating groups of grooves, teaches reducing noise by providing *groups* of transverse grooves with different pitches A, B and C (base pitches with different pitch lengths A, B and C) and optionally (3) Europe 436 suggests reducing noise by providing *groups* of transverse grooves with different circumferential pitch lengths such as LG1, LG2, LG3, etc.

Art Unit: 1733

Japan 408 / Europe 436's pitching technique is applicable to Cesarini et al since Cesarini et al teaches regulating (varying) the pitch of groups of grooves. See page 10.

As to claim 2, the tire is radial.

As to claim 3, Cesaarini et al suggests 3-7 grooves in each group.

As to claim 4, the pitches are for the tread.

As to claim 5, Japan 408 shows a specific sequence in figure 1 of A, C, C, B, C, C, B, C, etc.

As to claims 6-26, 32, 45-59, and 67-68, it would have been obvious to provide the profile structures / cross grooves as claimed in view of (1) Cesarini et al's suggestion that the pitch value between individual adjoining grooves of the group of the 3-7 grooves may be regulated to reduce noise or can be the same pitch p and optionally (2) Europe 436's suggestion to use different pitch lengths for blocks (land portions between transverse grooves) and different pitch sequences within the groups having different pitch lengths in the tire having reduced noise.

As to claims 27-29, the claimed pitch ratio would have been obvious in view of Europe 436's suggestion to use a max length to min length ratio of 1.5-1.9 for the land portions separated by the transverse grooves.

As to claims 30-31, note narrow notches 28.

As to claims 33-34, note notch 28 and transverse groove shoulder portion 16.

As to claims 35-37 and 39-41, note the tread pattern of figure 2 or figure 3.

As to claims 38 and 43-44, note the curved portion 19.

As to claims 42 and 60 (method), Cesarini et al and Japan 408 teach arranging the base pitches and teach a pneumatic radial tire, which one of ordinary skill in the art would readily understand is made by a method of manufacturing a tire.

As to claims 61-64, note the central depression.

As to claim 66, note grooves 21, 22.

Europe 822

9) **Claims 1-7, 9-10, 19-24, 35-40, 61, 62, 67, 69 and 70 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Europe 822 (EP 970822).**

Contrary to applicant's arguments, the profile structures in a base pitch of Europe 822 have different lengths. For example, in base pitch BLmin in figure 1, one profile structure has a length of a fraction of Lmax + a fraction of Lmin whereas the other profile structure has a length of a fraction of Lmin and a fraction of Lmin.

Europe 822 teaches a vehicle tire having a tread pattern as shown in figures 1 and 2. In figures 1-2, the base pitches have the different lengths BLmax and BLmin and two shoulder blocks 3a are provided for each central block 2a. In each base pitch is a cross groove separating two shoulder blocks. Europe 822 teaches that three shoulder blocks may be used for each central block 2a. When three shoulder blocks are used, each base pitch BLmax and BLmin comprises two cross grooves.

Claim 1 is anticipated by Europe 822's vehicle tire. Claim 1 reads on each of the one base pitch and the another base pitch each having two cross grooves. Claim 1 fails to require a different number of cross grooves in the base pitches. The claimed profile



Art Unit: 1733

structures read on the shoulder blocks 3a, which can number three within each base pitch. In any event: It would have been obvious to one of ordinary skill in the art to provide Europe 822's tire with two base pitches having different circumferential lengths (e.g. BLmin, BLmax) such that each base pitch comprises three shoulder blocks (profile structures) and two cross grooves since (1) Europe 822, directed to reducing noise and obtaining uniform wear, shows the tread has having two different length base pitches wherein each base pitch comprises one central block, two shoulder blocks and one cross groove and (2) Europe 822 suggests using three shoulder blocks for one central block as an alternative to using two shoulder blocks for one central block.

**10) Claims 63-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over Europe 822 as applied above and further in view of Europe 436.**

As to claims 63-65, it would have been obvious to one of ordinary skill in the art to use three base pitches instead of two base pitches for Europe 822's tread in view of Europe 436's suggestion to use three base pitches for a tire tread to reduce noise wherein each base pitch, like that of Europe 822, comprises plural blocks and transverse grooves.

Peda et al

**11) Claims 1, 3-7, 9, 11-15, 18-23, 30-37, 42 and 68 are rejected under 35 U.S.C. 102(a), (b), (e) as being anticipated by Peda et al (US 2002/0144762).**

See abstract, figure 1, figure 2, paragraphs 13-17.

The claimed circumferential groove reads on the center groove 4. The claimed base pitch reads on Peda et al's base pitch comprising two of the shoulder blocks, the

Art Unit: 1733

sipes, the transverse groove 3 extending to the center groove and the transverse groove extending partially into the larger center block. Figure 2. The claimed cross groove(s) read on the groove extending partially into the long block and/or the sipes (small grooves). The claimed profile structures read on the blocks or the block elements separated by the separated by the sipes / grooves.

Great Britain

**12) Claims 1-2, 4-6, 20-23, 31 and 35-42 are rejected under 35 U.S.C. 102(a), (b) as being anticipated by Great Britain (GB 2376217).**

See abstract, figure 1, page 6 lines 7-10, page 10 lines 23-25, page 11 lines 1-5. The claimed method steps are inherent in the manufacture of Great Britain's tire.

The claimed circumferential groove arranged in a central area of the tread reads on the central circumferential groove 2 at the centerline. The claimed base pitch reads on Great Britain's base pitch comprising lug groove 5, blocks 6B1 and subgroove 7. Each pitch therefore comprises two profile structures (blocks 6B1).

**13) Claims 1-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Great Britain in view of at least one of Europe 822, Peda et al and Europe 436 and optionally further in view of Japan 610 (JP 4-201610).**

Great Britain is considered to anticipate claim 1. In any event, it would have been obvious to arrange Great Britain's grooves such that the resulting tread has different length base pitches comprising profile structures as claimed in view of Great Britain's teaching to arrange the lug grooves 5, which define a repeating geometric pattern, at variable pitches to reduce noise and in view of the suggestion from at least

Art Unit: 1733

one of Europe 822, Peda et al and Europe 436 to use pitches of different lengths to reduce noise of a tire tread wherein the pitch of the tire tread is defined by a repeating geometric unit. With respect to circumferential grooves and curved diagonal grooves, Great Britain teaches this subject matter. See figure 1. The claimed profile structures and cross grooves would have been obvious in view of (1) Great Britain's teaching to divide the block 6 with a cross groove 7 and /or (2) Peda et al's teaching to divide a block with sipes. The claimed pitch ratio (claim 27+) is suggested by Europe 436. With respect to the application of Peda et al's teaching to divide a block with sipes to provide winter traction and claims such as 10, 6, 17, 32 and 66-70, Japan 406 suggests spacing the sipes at different distances to reduce noise and wear.

#### Remarks

14) Applicant's arguments with respect to claims 1-70 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments filed 1-23-06 have been fully considered but they are not persuasive.

15) No claim is allowed.

16) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is (571) 272-1221. The examiner can normally be reached on Mon. - Fri. 8:30 AM - 5:00 PM.

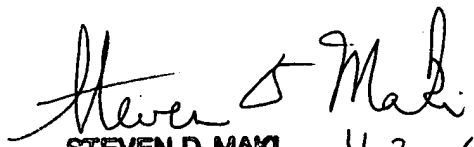
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone

Art Unit: 1733

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Steven D. Maki  
April 2, 2006

  
**STEVEN D. MAKI**  
**PRIMARY EXAMINER** 4-3-06